

REMARKS/ARGUMENTS

The above-identified patent application has been reviewed in light of the Examiner's Action dated March 23, 2009. Claims 1 and 2 have been amended, and Claim 13 has been canceled, without intending to abandon or to dedicate to the public any patentable subject matter. Accordingly, Claims 1-12, 14-16 and 18-22 are now pending. As set forth herein, reconsideration and withdrawal of the rejections of the claims are respectfully requested. Moreover, consideration of the amendments to Claims 1 and 2 is respectfully requested, as the amendment to Claim 1 incorporates a dependent claim, and the amendment to Claim 2 addresses an objection based on an informality.

Claims 1-12 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Although Applicants do not necessarily agree with all of the findings and statements with respect to this rejection, the elements of Claim 13, which depended from Claim 1 and was not rejected on this basis, has been incorporated into Claim 1. Accordingly, the rejections of Claim 1 and dependent Claims 2-12 should be reconsidered and withdrawn.

Claims 1-16 and 18-22 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,640,445 to David ("David"), in view of U.S. Patent Application Publication No. 2003/0018762 to Mullen ("Mullen"). In order to establish a *prima facie* case of obviousness under §103, there must be some suggestion or motivation to modify the reference or to combine the reference teachings, there must be a reasonable expectation of success, and the prior art reference or references must teach or suggest all of the claim limitations. (MPEP §2143.) Moreover, "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (*In re Kahn*, 441 F.3d 977, 988, 78 USPQ 2d 1329, 1336 (Fed. Cir. 2006); See also, *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418, 127 S.Ct. 1727, 1741, 82 USPQ 2d 1385, 1396 (U.S. 2007) (quoting statement of *In re Kahn* with approval).) However, all of the elements of the pending claims cannot be found in the cited references, whether those references are considered alone or in combination. In particular, there is no teaching, suggestion or description in the cited references of calculating for different segments of a task being performed by one resource

separate probabilities of completing those segments within a forecast horizon, to obtain a probability of that agent's availability within the forecast horizon, as claimed. Accordingly, the rejections of the claims as anticipated by or obvious in view of the cited references should be reconsidered and withdrawn.

The claimed invention is generally directed to forecasting the future availability of a resource or agent for a new work assignment. More particularly, according to the claimed invention, the probability of completing a task that can be broken into a number of differentiated segments is determined by separately determining the probabilities of each of the differentiated segments. For example, and without introducing limitations to the broader claims, an agent in a call center may be assigned to complete tasks that can be broken into a first segment during which the agent is speaking with a customer or other party ("talk time") and a second segment during which the agent is performing paper work following an instance of talk time ("wrap-up time"). A probability for each of these segments is then separately calculated. After the separate probabilities of the separate segments included in the task have been calculated, they are combined to obtain a probability related to whether the agent will be available within the forecast horizon. The references cited in the Office Action do not teach, suggest or describe segmenting a task into multiple segments and separately determining the probability that each segment will be completed within a forecast horizon in connection with obtaining an overall probability that a resource will be available within that forecast time horizon as claimed.

More particularly, the claimed invention specifies that a task be considered as at least first and second segments. A first probability related to an availability of a first resource within a forecast horizon is determined for the first segment, and a second probability related to the availability of the first resource within the forecast horizon is determined for the second segment. The first and second probabilities are combined, and the result of the combining is normalized to obtain a probability of agent availability within the selected forecast horizon. Notably, and as stated above and made explicit in the claims, the segments for which probabilities are calculated are part of the same task. Calculating probabilities for different segments of one task and then combining those separate probabilities to obtain an overall probability of resource availability within the selected time horizon is not taught, suggested or described by the cited references.

The David reference is generally directed to an outbound call pacing method that statistically matches the number of calls dialed to the number of available operators. In particular, a weight (*i.e.*, one weight) is assigned to each agent and is a function of how long an agent has been engaged in a call or an after call work. (David, Abstract.) The sum of the weights assigned to the agents is the predicted number of engaged agents that will become free within a time window. (*Id.*) As noted in the Office Action, the David reference does state that David calculates agent availability based on probability statistics. (See, *e.g.*, David, col. 2, ll. 63-66.) In addition, David discusses the use of one probability density function of the time a call takes from connection to an agent until an agent becomes free, and another probability density function of the elapsed time from when an agent begins after call work until he is free. (David, col. 5, ll. 49-67.) That is, David teaches applying a different probability density function to calculate a measure of whether an agent will become available to take a new call, depending on the task that an agent is engaged in. Accordingly, David discusses calculating an overall probability that an agent will become available by calculating different probabilities for different agents based on the task being performed by those different agents (*e.g.* either in a call or engaged in after call work), and the results for agents involved in the different types of work are summed. However, David does not describe calculating different probabilities for different segments of one task for one agent in order to obtain an agent arrival probability for that agent as claimed. Instead, each agent in David is assigned to either a first or a second class of work, and a probability is calculated for that assigned class. Therefore, because different probabilities for different segments of a task being performed by one agent and combining those separately determined probabilities for that one agent are not taught, suggested or described by David, the rejections of Claims 1-6, 8-17 and 19-23 as anticipated should be reconsidered and withdrawn.


The Mullen reference is cited in connection with computing a variance in agent time in different states. Although Mullen discusses variance, there is no disclosure in that reference of calculating for different segments of a task being performed by a resource separate probabilities of completing those segments within a forecast horizon as generally claimed. Accordingly, Mullen does not make up for all of the deficiencies in the David reference, and the rejections of Claims 7 and 18 as obvious should be reconsidered and withdrawn.

Because the references cited by the Examiner do not teach, suggest or describe separately determining for different segments of a first task a probability of completing each of the segments within a forecast horizon, and combining those probabilities in order to arrive at an overall forecast of the probability of agent availability within the selected forecast horizon as generally claimed, the rejections of the claims as obvious should be reconsidered and withdrawn. In addition, because the pending claims meet the test for statutory subject matter, the rejections under 35 U.S.C. §101 should also be reconsidered and withdrawn.

The application now appearing to be in form for allowance, early notification of same is respectfully requested. The Examiner is invited to contact the undersigned by telephone if doing so would be of assistance.

Respectfully submitted,

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